A Cahners Publication

PACKAGING

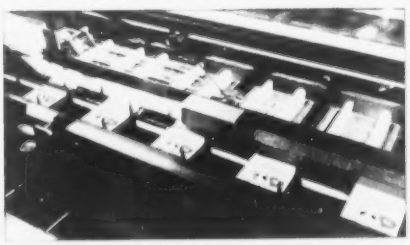
FOR BUYERS OF MACHINERY, CONTAINERS, MATERIALS, SUPPLIES, SERVICES / JULY 1992

EXCLUSIVE: THE PACKAGING 100

Find Out

★ What The 'Giants' Buy . . . And Why

★ Where They See The Best Chances For Growth

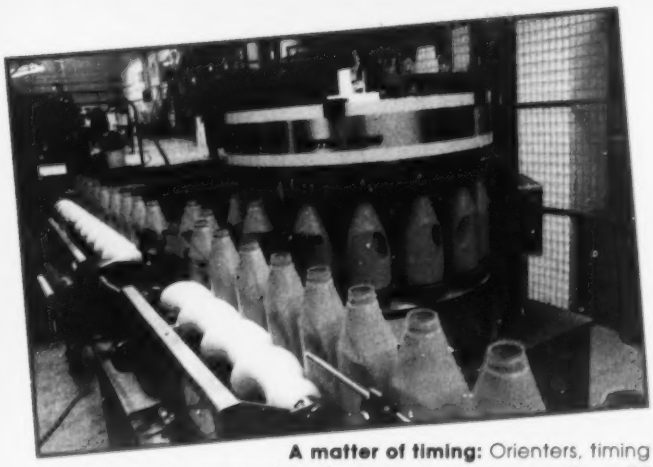


Greetings from a cartoning innovator—
See Package Engineering section

Plus

ISO 9000: Quality Booster Or Quagmire?

Keeping Packages On Time And Unscrambled



A matter of timing: Orienters, timing screws and unscramblers keep packages in sync. Page **35**

New cartoning line packages annual production of Valentine Day cards in just 10 weeks. Page **30**

Quality at any cost? Will ISO 9000 become the world standard? Page **45**

Find out what the packaging trendsetters think. Page **24**

PACKAGING.

A CAHNERS PUBLICATION/VOLUME 37 NUMBER 8

FEATURES

The sixth annual PACKAGING 100 24
Leading packagers respond to our exclusive opinion survey as expenditures hit $31.4 billion.

New line targets immediate savings 30
American Greetings has cut warehouse and floor space, labor and materials waste.

Timing screws, orienters and unscramblers boost efficiency 35
Systems offer versatility in speed and parts handling.

Quick Reference Chart 38
Suppliers of timing screws, orienters and unscramblers.

Building quality pays off 45
Whether packagers encourage their suppliers to try for ISO 9000 status or certify them internally, it's the process that really counts.

ISO 9000: Fad or foundation 46
Okay, so it's not perfect. But it's the closest we have to a world standard for product quality.

New ways to ship bulk liquids 49
Traditional drums are familiar and easy to use. But alternatives offer disposal benefits.

Bulk container boosts efficiency 53
Pallet downsizing, double stacking bring overseas freight savings.

Bulk packs cut risk of damage 53
Recyclable units lower shipping costs and ease handling of fibers.

DEPARTMENTS

Breaking News: Report from Pakex 1
Editorial: Search for the meaning of 'package' 9
The Consumer Connection: Plastic still dominates microwave packaging preferences 10
New Packages: Zipper reseal talks turkey 13
Environmental News: Recycling facility opens 21

Packaging Products 55
News Briefs/Calendar 66
People 67
Classified 68
Advertisers Index 74
Reader Service Card 75

NEXT MONTH

What do retailers want? Mass-merchandising is taking cosmetics sales away from department stores. Discover what package details catch the retailer's eye in Part II of our series.

Microwave containers: Public's penchant for plastic grows

These stats—part of PACKAGING's exclusive 1992 Consumer Survey—come from the more than 75% response to 1,000 questionnaires we sent to consumers nationwide. In tracking such consumer preferences for eight years, the Consumer Survey has become a highly credible storehouse of vital marketing information. Each month this column will examine a portion of the survey results up close, shedding new light on the ever-changing attitudes and desires of today's consumer as they affect the field of packaging.

Mary O'Grady
Research Manager
Cahners Publishing Co.

Nine out of 10 consumers say they use a microwave oven at home and almost half that many use one at work. With microwave usage at such high levels, it is increasingly important to be aware of what types of microwavable food containers consumers prefer.

By nearly a two-to-one margin, consumers prefer plastic packaging over either paperboard or glass when it comes to microwavable food containers. More specifically, over 44% favor plastic materials for such packaging—up from 37% in 1991.

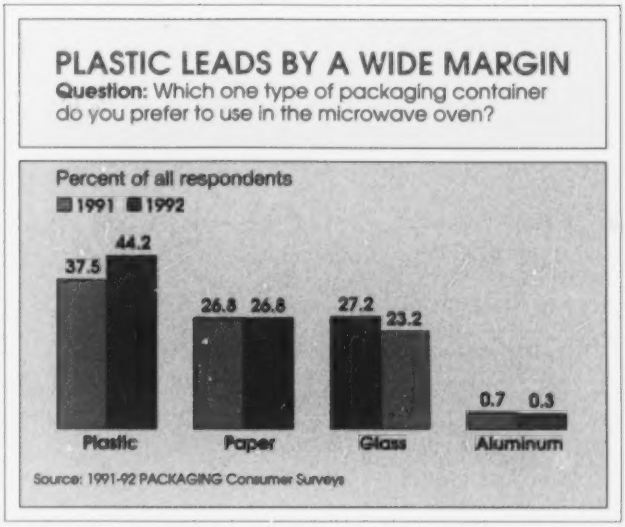
While preference for paperboard microwave packaging has remained constant since 1991 at 27%, the percent of consumers who say they prefer glass containers has declined from 27% last year to 23% this year.

Tiny blip for aluminum

Aluminum packaging for the microwave has never really made much of an impact on consumers' preferences. It was chosen by only 0.8% of respondents back in 1990. This year, only 0.3% say they prefer such containers for use in the microwave. It seems that all the product/package development and marketing efforts to educate consumers about the safety of aluminum in the microwave hasn't yielded hoped-for results.

Today's active consumers favor plastic microwave containers most. More than half of young couples—likely to have little time for food preparation—prefer plastic microwavable containers. About 26% of consumers in this lifestage prefer paperboard, and 18% choose glass.

Which demographic group prefers plastic for microwaving the most? It's young singles. With on-the-go lifestyles and smaller portions, this group may appreciate the reusability of a plastic microwavable container for "leftovers," and may explain the 60% who prefer this package.



SpaceKraft®

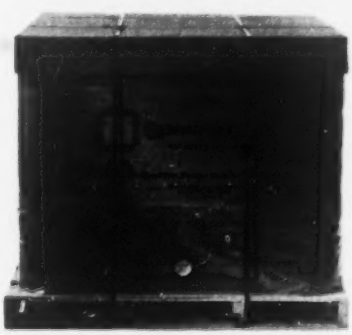
The environmentally friendly bulk shipper for nonhazardous liquids.

Recyclable. Biodegradable. Waste-to-energy efficient.

One container carries as much as 4 to 6 drums in 20% less space.

Takes one man just 3 minutes to set up.

Endures up to 40,000 pounds compression.



Stacks up to 4 high on sturdy pallets.

Easy dispensing from top, bottom or front of box.

No wood or metal parts required.

Manufactured by a patented process, SpaceKraft® is continuously wound from 8 plies of 69-pound kraft linerboard and 33-pound A-flute medium. The result: a *seamless* bulk shipper that needs no wood or metal parts—plus uncommon handling ease, strength and disposability. The inner bag is available in a broad range of FDA food grade multi-ply films or coextruded films for specific barrier requirements. All are provided in easy-to-use corrugated cassettes.

SpaceKraft® containers meet or exceed all National Safe Transit Association (NSTA) tests for liquid packaging and are approved by the National Motor Freight Association for shipping nonhazardous liquids.

Call or write MacMillan Bloedel Bulk Packaging • 1811-A West Oak Pkwy • Marietta GA 30062 (404) 425 9338 • (800) 635 4475.

MacMillan Bloedel Bulk Packaging

For information circle 6

THE SIXTH ANNUAL PACKAGING 100

Leading packagers respond to our exclusive opinion survey as expenditures hit $31.4 billion.

Mark Spaulding
Senior Editor and
Mary O'Grady
Research Manager
Cahners Publishing Co.

While the temperature of the American economy remains lukewarm, this year's PACKAGING 100 survey reveals robust growth.

Our exclusive study of the 100 largest domestic consumers of packaging materials and containers shows these giants spending $2.1 billion more to package products for the marketplace in 1991 than in 1990. This represents a 7.2% increase over 1990 and a 28% rise over 1989.

The combined purchasing power of these top 100 companies also continues to dominate the domestic packaging field. Last year, these packagers consumed 41.7% of all packaging materials produced in the U.S.—up from a 40% market share in 1990 and 37.5% in 1989. The top 10 companies alone spent more than $14.6 billion last year—almost 18% of all U.S. packaging-field output.

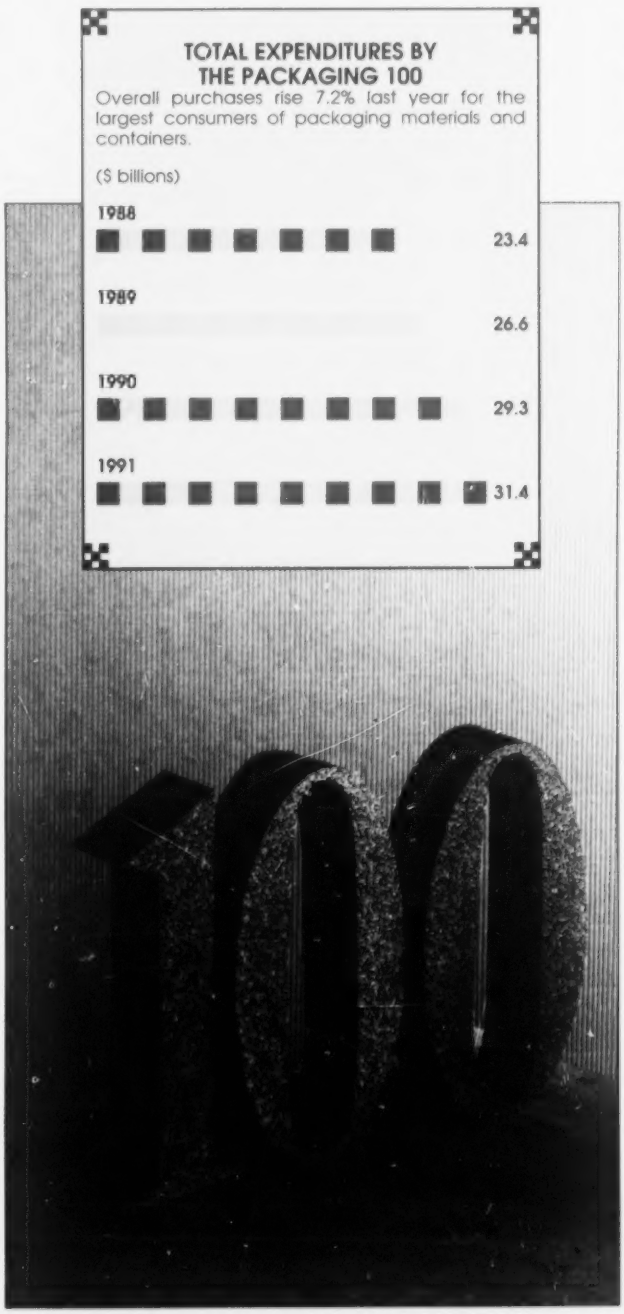
However impressive these statistics may be, individual members of the PACKAGING 100 saw their expenditures fluctuate wildly: Significant increases by some packagers were largely offset by declines in spending by automotive, petroleum-product and durable-goods makers. (See tables next page).

How we got the stats

PACKAGING analyzed 200 companies to ascertain the amount spent on packaging materials for use during calendar-year 1991 to package all products sold in the U.S. (This includes the value of any self-manufactured containers.)

Supplemental information from Cahners Economics and elsewhere helped build our database. Purchasing figures were estimated by relating packaging costs to the value of U.S. product shipments.

In addition to compiling our exclusive 100 list, we wanted to find out more about what the giants buy . . . and why. To do this, Cahners Research was recruited to survey 2,000 packaging managers at these 100 leading companies. Questions spanned across the entire spectrum of issues related to the packaged-goods business in America.



Around the corner

Knowing that future success depends a lot on good planning, we asked managers to forecast growth in their expenditures for both packaging materials and machinery in the coming years. Overall, respondents from the PACKAGING 100 companies foresee materials spending up 8.0% this year over last and another healthy increase of 8.7% next year. Growth rates vary by industry. (See chart next page.)

Our respondents see even greater purchase hikes on the capital-equipment side. They're looking at spending 10.2% more in 1992 on packaging machinery and 10.4% more in 1993. Clearly, after several years of deferred machinery purchases, packagers are planning to invest heavily for the rest of the 1990s.

When it comes to why they buy what they buy, the PACKAGING 100 managers call quality the most important factor when making purchase decisions. Nearly 75% of our respondents choose it over knowledgeable service, good supplier reputation, low price and short leadtimes.

Among specific industries, high quality is considered most important by 80% of packagers of chemicals and allied-products, and almost 70% of food and beverage

Copyright 1992, PACKAGING Magazine, Cahners Publishing Co., a Div. of Reed Publishing U.S.A.

1992 Rank	Company & Headquarters	Packaging Expenditures ($ Millions)	% Change from last year
1	**Philip Morris Cos., Inc.,** New York, NY	2,631.50	1.02%
2	**Anheuser-Busch Cos.,** St. Louis, MO	2,510.00	3.08
3	**PepsiCo, Inc.,** Purchase, NY	1,646.50	4.41
4	**Procter & Gamble Co.,** Cincinnati, OH	1,608.00	3.28
5	**Coca-Cola Co.,** Atlanta, GA	1,320.00	4.93
6	**ConAgra,** Omaha, NE	1,315.00	31.71
7	**Coca-Cola Enterprises,** Atlanta, GA	1,133.50	.49
8	**RJR Nabisco,** New York, NY	1,032.00	4.56
9	**Seagram Co. Ltd.,** Montreal, Quebec	762.00	4.24
10	**Unilever US Inc.,** New York, NY	674.75	7.10
11	**Sara Lee Corp.,** Chicago, IL	610.75	4.40
12	**Nestle USA, Inc.,** Glendale, CA	578.00	2.30
13	**Adolph Coors Co.,** Golden, CO	536.61	1.00
14	**Brown-Forman,** Louisville, KY	450.25	6.95
15	**Eastman Kodak,** Rochester, NY	437.00	3.07
16	**Campbell Soup Co.,** Camden, NJ	405.00	–.74
17	**Borden,** New York, NY	404.05	.51
18	**American Home Products,** New York, NY	402.27	5.86
19	**Stroh Brewing Co.,** Detroit, MI	399.75	1.20
20	**General Mills,** Minneapolis, MN	391.04	10.00
21	**Clorox Co.,** Oakland, CA	359.00	11.49
22	**Cadbury Schweppes,** Stamford, CT	355.00	9.91
23	**Archer-Daniels-Midland,** Decatur, IL	343.00	9.24
24	**Grand Metropolitan,** Minnepolis, MN	326.00	–1.51
25	**Rhone-Poulenc Rorer,** Collegeville, PA	317.48	31.19
26	**G. Heileman Brewing Co.,** La Crosse, WI	305.75	1.92
27	**Whitman Corp.,** Chicago, IL	302.50	8.81
28	**Del Monte USA,** San Francisco, CA	297.50	1.19
29	**Revlon Group,** New York, NY	294.25	5.09
30	**H.J. Heinz Co.,** Pittsburgh, PA	275.00	5.36
31	**John Labatt Ltd.,** London, Ontario	266.85	–5.04
32	**Ocean Spray Cranberries,** Plymouth, MA	258.38	4.18
33	**Kellogg Co.,** Battle Creek, MI	252.00	13.51
34	**Quaker Oats Co.,** Chicago, IL	251.75	5.33
35	**S.C. Johnson & Son,** Racine, WI	249.00	10.18
36	**Johnson & Johnson,** New Brunswick, NJ	247.00	16.51
37	**Sherwin-Williams,** Cleveland, OH	237.00	25.40
38	**Dean Foods Co.,** Franklin Park, IL	204.75	5.00
39	**Warner-Lambert,** Morris Plains, NJ	193.25	8.26
40	**Bristol-Myers Squibb,** Evansville, IN	191.00	9.14
41	**American Cyanamid,** Wayne, NJ	190.93	10.68
42	**Tyson Foods,** Springdale, AR	186.08	7.00
43	**Du Pont de Nemours,** Wilmington, DE	186.00	–4.57
44	**Geo. A. Hormel & Co.,** Austin, MN	185.12	5.68
45	**Hershey Foods Corp.,** Hershey, PA	184.68	2.31
46	**Allied-Signal Inc.,** Morristown, NJ	178.75	–4.92
47	**Dow Chemical USA,** Midland, MI	172.00	–4.44
48	**CPC International,** Englewood Cliffs, NJ	171.00	.88
49	**Colgate-Palmolive Co.,** New York, NY	170.00	– 15.00
50	**Dr. Pepper/Seven-Up Co.,** Dallas, TX	169.13	5.05
51	**Ralston-Purina Co.,** St. Louis, MO	169.00	3.68%
52	**Dole Food Co.,** Los Angeles, CA	161.00	.63
53	**Avon Products Inc.,** New York, NY	157.50	5.00
54	**Dial Corp.,** Phoenix, AZ	148.38	4.49
55	**General Motors,** Detroit, MI	142.00	–4.70
56	**Mars, Inc.,** Hackettstown, NJ	141.00	4.44
57	**Keebler Co.,** Elmhurst, IL	138.02	3.00
58	**Iowa Beef Processors,** Dakota City, NE	137.17	1.98
59	**3M Co.,** St. Paul, MN	134.43	1.07
60	**Pabst Brewing Co.,** Milwaukee, WI	132.50	2.12
61	**Pet, Inc.** , St. Louis, MO	127.00	–6.62
62	**American Brands,** Old Greenwich, CT	118.00	9.26
63	**Exxon Corp.,** Irving, TX	115.85	–4.26
64	**Bayer USA Inc.,** Pittsburgh, PA	113.00	3.20
65	**IBM,** Armonk, NY	108.00	–10.37
66	**McCormick & Co.,** Hunt Valley, MD	106.13	6.13
67	**Schering-Plough Corp.,** Madison, NJ	105.50	13.44
68	**Ford Motor Co.,** Dearborn, MI	101.16	–15.70
69	**Universal Tobacco,** Richmond, VA	98.25	15.25
70	**Hoechst Celanese,** Bridgewater, NJ	96.00	16.72
71	**Cosmair,** New York, NY	94.62	12.64
72	**Sunkist Growers, Inc.,** Sherman Oaks, CA	93.90	14.51
73	**Pfizer,** New York, NY	93.50	10.00
74	**Gold Kist, Inc.,** Atlanta, GA	91.06	5.27
75	**General Electric,** Fairfield, CT	90.00	0.00
76	**Chiquita Brands Int'l,** Cincinnati, OH	89.13	4.24
77	**Reckitt & Colman plc,** London	89.00	17.88
78	**Morton International,** Chicago, IL	89.00	17.11
79	**Chevron Corp.,** San Francisco, CA	88.25	–3.02
80	**Motorola, Inc.,** Schaumburg, IL	88.00	0.00
81	**PPG Industries Inc.,** Pittsburgh, PA	87.02	–5.00
82	**Bausch & Lomb,** Rochester, NY	85.25	11.44
83	**Mobil Corp.,** Fairfax, VA	82.50	–8.84
84	**Tenneco Inc.,** Houston, TX	80.75	–2.71
85	**Central Soya,** Fort Wayne, IN	80.00	3.90
86	**Merck & Co.,** Rahway, NJ	78.13	10.82
87	**Baxter International,** Deerfield, IL	75.11	10.46
88	**Gerber Products,** Fremont, MI	72.30	4.03
89	**Land O'Lakes, Inc.,** Arden Hills, MN	72.10	3.00
90	**Texaco, Inc.,** White Plains, NY	68.50	–8.67
91	**Black & Decker,** Towson, MD	68.13	–6.68
92	**Monsanto,** St. Louis, MO	68.00	–1.45
93	**SmithKline Beecham,** Philadelphia, PA	64.50	7.50
94	**Alberto-Culver Co.,** Melrose Park, IL	63.34	8.27
95	**Flowers Industries,** Thomasville, GA	61.49	1.01
96	**Olin Corp.,** Stamford, CT	61.05	11.00
97	**Thorn Apple Valley,** Southfield, MI	60.53	22.91
98	**Levi Strauss & Co.,** San Francisco, CA	59.65	16.96
99	**Amoco Corp.,** Chicago, IL	58.00	0.00
100	**Chrysler Corp.,** Highland Park, MI	56.13	–8.74

Top companies foresee materials spending up 8.0% this year and up 8.7% in 1993.

packagers. These are packaging-intensive businesses.

Few innovators?

Back in the mid-1980s, it seemed as if a month didn't go by without some astounding new technological development being commercialized by a leading packager. Where has all the innovation gone?

Only 7% of our responding managers say their company's use of packaging technology is "very innovative." Conversely, 4% say they are "not at all innovative."

To find out why, we listed eight possible reasons for minimal use of packaging technology. Nearly half of the respondents cite tight cost containment at their companies as the chief factor for lackluster innovation. Almost equally to blame is short-sighted upper management.

At the forefront

If any one issue has challenged the packaging field more than the rest since the mid-1980s, it is the environment. And managers at the Top 100 packaged-goods companies are on the front lines.

When asked to choose the best way to counteract criticism of packaging's negative environmental impact, 44% of respondents choose source reduction. (See chart at right). On the other hand, when it comes to the most *cost-effective* means of handling trash, about 51% of respondents say to construct more recycling centers.

The 1992 PACKAGING 100 is an extremely influential group of companies. Their impact on the overall U.S. economy is growing, and what they think is bound to have a significant effect on America's business future. ■

PLEASE RATE THIS ARTICLE

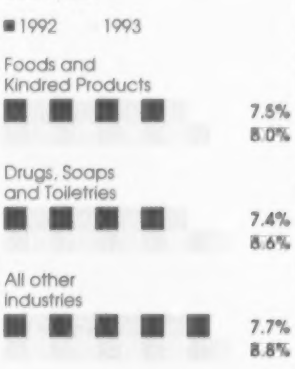
How would you rate this article? To reply, circle the appropriate number on the reader service card:

Outstanding 514
Above Average 515
Average 516
Below Average 517

PACKAGERS FORESEE STRONG GROWTH IN MATERIALS EXPENDITURES...

Overall, packagers are planning for an 8% increase in materials and containers spending this year and an 8.7% increase in 1993.

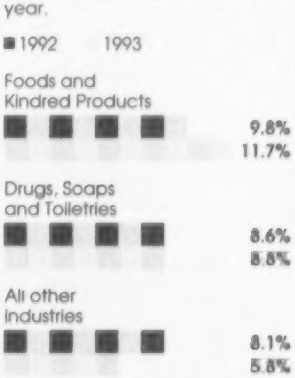
Question: To the nearest percent, estimate the anticipated growth in your company's packaging materials expenditures for each year.



...AND EVEN GREATER HIKES IN MACHINERY PURCHASES

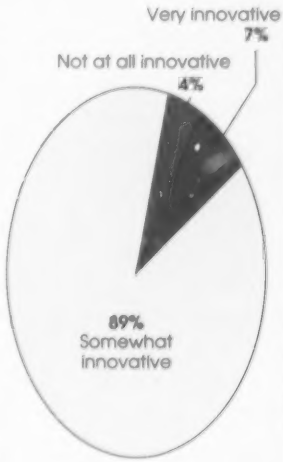
Total expenditures for packaging machinery are expected to climb 10.2% this year and another 10.4% next year.

Question: To the nearest percent, estimate the anticipated growth in your company's packaging machinery capital-equipment expenditures for each year.



FEW TOP 100 PACKAGERS SAY THEY'RE "VERY INNOVATIVE"...

Question: Rate your company's use of packaging technology.



...AND HERE'S WHY

Question: Which three factors are most responsible for your company's minimal use of packaging technology/innovation?

(Top five factors chosen from a list of eight)

1. Tight cost containment policies
2. Short-sighted upper management
3. Slow technological developments
4. Personnel reductions
5. Cutbacks in R&D

SOURCE REDUCTION LEADS AS RESPONSE TO ENVIRONMENTAL CONCERNS...

Among all respondents, designing simpler packaging should be the industry's top environmental effort.

Question: In your opinion, what's the best way to counteract criticism for packaging's negative impact on the environment?

Percent choosing this response

1. Design simpler, less-extravagant packaging **44.0%**
2. Design packaging for recycling **41.9%**
3. Design biodegradable packaging **8.1%**
4. Design easily-incinerated packaging **3.4%**
5. Move to standardized packaging **2.6%**

...BUT RECYCLING IS SEEN AS MOST COST-EFFECTIVE SOLUTION

More than half of the Top 100 packagers think constructing recycling centers is most cost-effective, and nearly one-quarter chose incineration.

Question: What is the most cost-effective means of handling trash?

Percent choosing this response

1. Construct more recycling centers **51.5%**
2. Build more incinerators **22.5%**
3. Ban some forms of packaging **16.6%**
4. Force retailers to take back used packages **6.4%**
5. Dig more landfills **3.0%**

Source: 1992 PACKAGING 100 Survey

Leading Packagers Voice Their Opinions

Packaging education is more important than management skills. Career-threatening corporate mergers are still a reality for some.

Job experience is more important than formal packaging education for a packaging professional. Environmental claims supporting one material over another are detrimental to the packaging field overall. And most new packaging technology originates right here at home.

These are the strong opinions of respondents to a major portion of our exclusive 1992 PACKAGING 100 Survey. We asked corporate managers at the top 100 purchasers of packaging materials and containers to indicate how strongly they agreed or disagreed with several statements. Some of the results were expected, but some were surprising.

Regardless what type of product respondents package, about 80% feel that job experience outweighs formal packaging education for a packaging professional to be successful in his/her job. The strongest support for this view comes from packagers of textile-mill, rubber and fabricated-metal products.

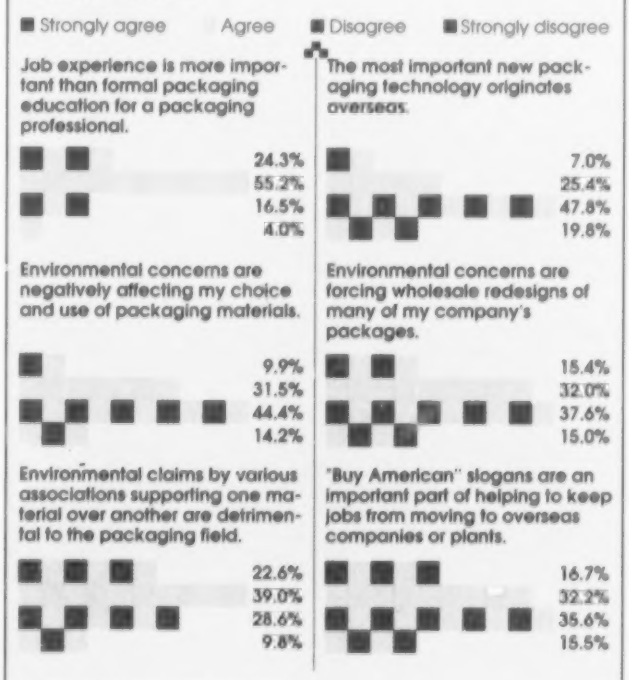
On the other hand, formal packaging education is considered more important than administrative or managerial skills. More than 61% overall agree with this thinking. Specifically, two-thirds of chemical packagers and 90% of electrical-equipment makers responding hold this opinion.

The late-1980s wave of corporate mergers and acquisitions has died down. Along with it, so has the fear that such mergers are threatening the careers of managers at the PACKAGING 100.

TOP 100 MANAGERS EVALUATE WIDE RANGE OF PACKAGING ISSUES

Almost 80% of respondents say that job experience is more important than formal packaging education, and two-thirds of respondents believe that the most important new packaging technology originates in the U.S. About half believe in the importance of "Buy American" slogans for keeping U.S. jobs at home.

Question: Indicate to what extent you agree or disagree with the following statements.



Source: 1992 PACKAGING 100 Survey

Nearly 83% of our respondents no longer feel such business deals are endangering their jobs.

Job-threatening corporate mergers are still a reality, however, for almost 17% of respondents in the jewelery, toys and sporting-goods industries.

Enviro-opinions

By a 60/40 ratio, packaging managers at these companies overall feel that environmental concerns are *not* having an effect on their choice and use of packaging materials. That ratio is reversed, however, for managers in the drug and chemical industries. For 57% of them, eco-concerns *are* negatively affecting their choice of certain packaging materials.

By a similar 60-40 ratio, our respondents agree that environmental claims supporting one packaging material over another really *are* detrimental to the packaging field overall.

Opinion is mixed when it comes to "Buying American." Only half of PACKAGING 100 managers say "Buy American" slogans are important to keeping jobs from moving to overseas companies or plants. Those packagers agreeing most strongly with the statement come from the textile-mill, apparel and construction-product industries. ■

—Mark Spaulding

Top 100 Reveal Global Plans

Greatest opportunities are close to home, they say. More than half support North American Free Trade Agreement.

North America will continue to hold the best potential for increased sales opportunities in the 1990s. The creation of a single European marketplace will help more than hinder packaged-goods sales. And more than one-third of America's leading packagers already do significant business in Canada and Mexico.

These are just a few of the findings from our exclusive 1992 PACKAGING 100 Survey. By means of a questionnaire mailed in April 1992, we asked managers at the top 100 companies a number of questions related to international business. Their responses reveal some important trends for global marketing in the coming years.

Nearby opportunities

Markets close to home continue to hold the best opportunities for PACKAGING 100 companies. North America was the top choice of 60% of respondents; the European Community came in a close second with 56%.

Following the downfall of communism and the rapid development of market economies in many Eastern European countries, it's perhaps not surprising that Eastern Europe was chosen by 40% of respondents as a key future market for their company's packaged products. Almost as important for some packagers is the Pacific Rim: 37% chose this market.

EC market helpful

Almost 50% of the PACKAGING 100 managers responding expect a single EC market to help their packaged-goods business. Most positive about this are packagers of drugs, soaps and toiletries, electronic equipment and medical devices.

Still, 40% of respondents see the creation of the single EC market as having no effect on their business at all. Those expecting such a market to "somewhat hinder" their sales include makers of apparel and fabricated-metal products.

The idea of future sales in the EC is one thing, but strong manufacturing and product packaging throughout a potential "United States of North America" is already an established fact closer to home.

About 85% of our survey respondents say they already do a fair share of their business in Canada and about 75% of the PACKAGING 100 packagers are equally involved in Mexico.

Many favor free trade

Leading one day to a potential continent-wide marketplace is the North American Free Trade Agreement, currently under negotiation. With such deep involvement in both Canadian and Mexican business already in place by these 100 packagers, it's not surprising that 53% of our respondents favor the treaty's establishment. Only 9.7% do not.

Strongest support for the NAFTA comes from food, beverage, textile and electronics makers. Those managers expressing the most negative view of such a treaty come from the petroleum and construction-product industries.

Still, a significant minority—37%—are undecided about the NAFTA's ratification. PACKAGING's 100 managers in the toy, sporting goods and jewelry businesses were the most undecided over this issue. ■

—Mark Spaulding

NORTH AMERICA, EUROPEAN COMMMUNITY ARE TOP MARKETS

Markets close to home continue to hold the best opportunities for Packaging 100 companies.

Question: Which three of the following regions represent the best potential for increased sales opportunities for your company's packaged goods in the 1990s?

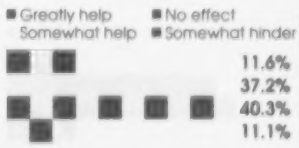
Percent choosing this region

1. North America 59.9%
2. European Community 55.9%
3. Eastern Europe 39.6%
4. Pacific Rim 36.6%
5. Latin America 33.5%
6. Africa/Middle East 9.3%

MOST PACKAGERS SEE SINGLE EUROPEAN MARKET AS BENEFICIAL

Almost 50% of respondents expect an EC market to help their business.

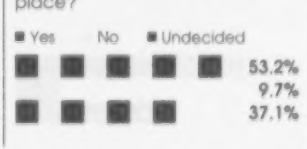
Question: What affect will the creation of the Single European Community marketplace have on your packaged-goods business?



PACKAGERS REMAIN UNDECIDED OVER NORTH AMERICAN FREE TRADE

Two-thirds of medical-device manufacturers support an agreement.

Question: Do you support the establishment of the North American Free Trade Agreement merging the U.S., Canada and Mexico into one marketplace?



Source: 1992 PACKAGING 100 Survey